Ogg Theora video, Firefox 3.1, Archive.org & Wikimedia support

Internet Archive
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archive.org

New <video> tag coming!

example:

<video poster="http://www.archive.org/images/logo.jpg"
    controls="true" autoplay="true"
    src="http://www.archive.org/download/to-SF/toSF.ogv">
  for firefox betans
</video>

Trivial video embedding - may revolutionize video!

Firefox 3.1 beta released Oct1
Full release by ~EOY2008

Ogg Theora video

Thought to be most free, unencumbered video codec

Libraries/tools available from:
- xiph.org (libtheora)
- annodex.net/software/liboggz/
- ffmpeg
- flowplayer

archive.org

mission to allow free uploading, storage, and serving for all

- 1 million books
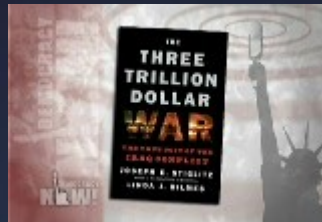- 400K audio progams and concerts
- 100 billion web pages

The Internet Archive, a 501(c)(3) non-profit, is building a digital library of Internet sites and other cultural artifacts in digital form. Like a paper library, we provide free access to researchers, historians, scholars, and the general public.

archive.org will rederive movies

We have news:
- Democracy Now!
- US congress (w/ metavid)

games, speed runs
cartoons/animations
feature films

and more!

night of the living dead

how we make ogv fast/reliably

High Level:

- use ffmpeg to turn any video to "rawvideo"
- pipe its output to *another* ffmpeg to turn the video to "yuv4mpegpipe"
- pipe its output to the libtheora tool
- for videos with audio, ffmpeg create a vorbis audio .ogg file.
- add tasty metadata (with liboggz utils).
- combine the video and audio ogg files to an .ogv output!

tikirobot.net/wp/author/tracey-pooh
(or just google "ogv tracey" 8-)

\<code\>

```
ffmpeg -an -deinterlace -s 400x300 -r 20.00 -i CapeCodMarsh.avi
   -vcodec rawvideo -pix_fmt yuv420p -f rawvideo -
   | ffmpeg -an -f rawvideo -s 400x300 -r 20.00 -i - -f yuv4mpegpipe -
   | libtheora-1.0/lt-encoder_example --video-rate-target 512k
      - -o tmp.ogv;
```

pipes = nice on 2+ cores

```
ffmpeg -i CapeCodMarsh.avi -vn -acodec vorbis
   -ac 2 -ab 128k -ar 44100 audio.ogg;
```

```
oggz-comment audio.ogg -o audio2.ogg TITLE="Cape Cod Marsh"
   ARTIST="Tracey Jaquith"
   LICENSE="http://creativecommons.org/licenses/publicdomain/"
   DATE="2004" ORGANIZATION="Dumb Bunny Productions"
   LOCATION=http://www.archive.org/details/CapeCodMarsh;
```

```
oggzmerge tmp.ogv audio2.ogg -o CapeCodMarsh.ogv;
```

archive.org is …

adding metadata to .ogv (and h.264 .mp4)

jumping into streams -- oggzchop (and mod_h264_streaming with lighttpd)

timecodes, standards for accessing:
- annodex.net/TR/draft-pfeiffer-temporal-fragments-03.html
- archive.org/download/to-SF/toSF_512kb.mp4?t=74.5

serving search results in JSON, CSV, XML

serving item metadata in JSON

h.264 mp4 creation

ffmpeg -i CapeCodMarsh.avi -b 512k -s 320x240 -vcodec h264 -r 20.00 -bf 0 -level 13 -qmax 35 -maxrate 768k -title "Cape Cod Marsh - http://www.archive.org/details/CapeCodMarsh" -year "2004" -comment "license:http://creativecommons.org/licenses/publicdomain/" -author "Tracey Jaquith" -pass 1 -an cape.mp4;

[same args above...] -pass 2 -acodec aac -ab 64k -ac 2 cape.mp4;

mp4creator -optimize cape.mp4

pluses:
- plays on iphone
- plays in flash plugin
- works with lighttpd mod_h264_streaming

minuses:
- longer to make
- possible licensing / IP issues

metavid / wiki

metavid has a *great* web player that:

will natively play .ogv if codec

will use flowplayer if flash/h.264

can play MPEG

will use chopping/seeking for snippets

can jump from clip format A to clip format B

is now being incorporated into wikimedia

goals

make CC licensed (and otherwise) videos available

enable online transclusion and editing/mashups with wikimedia and metavid

rederive nearly 200,000 movies!